

AMENDMENTS TO THE CLAIMS:

5/20/01
1 (Currently Amended) A photoelectric converting apparatus
comprising:
a sensor unit including a plurality of pixels each having at least a
photoelectric-converting means converter and a first-amplifying means amplifier for
amplifying a signal derived from said photoelectric-converting means converter to output
the amplified signal; and

Q 2
a memory unit including a plurality of memories each having at least
~~storing means~~ a storage element for storing therein the signal derived from said sensor
unit and a second-amplifying means amplifier for amplifying a signal derived from said
~~storing means~~ storage element to output an amplified signal wherein
a gain of said first-amplifying means amplifier is made different
from a gain of said second-amplifying means amplifier.

2. (Currently Amended) A photoelectric converting apparatus
according to Claim 1, wherein said first-amplifying means and said second-amplifying
means amplifiers are constituted by MOS transistors.

3. (Currently Amended) A photoelectric converting apparatus
according to Claim 2, wherein said first-amplifying means and said second-amplifying
means amplifiers are constituted by both amplifying MOS transistors and load MOS
transistors.

4. (Currently Amended) A photoelectric converting apparatus according to Claim 3, wherein a conductance of the load MOS transistor included in said first ~~amplifying means~~ amplifier is made different from a conductance of the load MOS transistor included in said second ~~amplifying means~~ amplifier.

5. (Currently Amended) A photoelectric converting apparatus according to Claim 4, wherein a gate length of the load MOS transistor included in said first ~~amplifying means~~ amplifier is made different from a gate length of the load MOS transistor included in said second ~~amplifying means~~ amplifier.

6. (Currently Amended) A photoelectric converting apparatus according to Claim 4, wherein a gate width of the load MOS transistor included in said first ~~amplifying means~~ amplifier is made different from a gate length of the load MOS transistor included in said second ~~amplifying means~~ amplifier.

7. (Currently Amended) A photoelectric converting apparatus according to Claim 4, wherein a gate oxide layer thickness of the load MOS transistor included in said first ~~amplifying means~~ amplifier is made different from a gate oxide layer thickness of the load MOS transistor included in said second ~~amplifying means~~ amplifier.

8. (Currently Amended) A photoelectric converting apparatus according to Claim 3, wherein a conductance of the amplifying MOS transistor included in

said first ~~amplifying means~~ amplifier is made different from a conductance of the amplifying MOS transistor included in said second ~~amplifying means~~ amplifier.

9. (Currently Amended) A photoelectric converting apparatus according to Claim 8, wherein a gate length of the amplifying MOS transistor included in said first ~~amplifying means~~ amplifier is made different from a gate length of the amplifying MOS transistor included in said second ~~amplifying means~~ amplifier.

Q² 10. (Currently Amended) A photoelectric converting apparatus according to Claim 8, wherein a gate width of the amplifying MOS transistor included in said first ~~amplifying means~~ amplifier is made different from a gate width of the amplifying MOS transistor included in said second ~~amplifying means~~ amplifier.

11. (Currently Amended) A photoelectric converting apparatus according to Claim 8, wherein a gate oxide layer thickness of the amplifying MOS transistor included in said first ~~amplifying means~~ amplifier is made different from a gate oxide layer thickness of the amplifying MOS transistor included in said second ~~amplifying means~~ amplifier.

12. (Currently Amended) A photoelectric converting apparatus according to Claim 1, further comprising a ~~transferring means~~ system for amplifying the signal derived from said sensor unit and/or said memory unit to transfer the amplified signal to said sensor unit and/or said memory unit.